



June 26, 1997

FINAL TECHNICAL REPORT FOR NASA AMES AGREEMENT NO. NCC 2-735

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The Cientificos Project was designed to strengthen The National Hispanic University in its capacity to provide quality science and mathematics preparation to its students plus a vehicle to do outreach to the Hispanic youth to motivate them to pursue careers in math and science. Clearly, Latinos are grossly underrepresented in these career areas.

Following are the Principal Investigator's findings and recommendations for the Cientificos Project agreement No. NCC 2-735.

* The project upgraded the University science laboratory by installing four new lab tables, four new microscopes, an Apple computer and printer and some other perishable supplies. The new additions were a welcome site for both professors and NIU students. These enabled more students to utilize separate microscopes rather than having to share equipment during lab experiments;

* Over one thousand minority and low income high school students participated in three Science and Math motivational convocations featuring outstanding Latino role models such as Astronaut Franklin Chang Diaz, Astronaut Helen Ochoa, and other minority leaders in science. Students voiced very positive comments towards pursuing careers in science and mathematics.

* 1100 middle and high school students participated in "hands-on" math and science workshops featuring presenters from NASA Ames, Apple, Applied Materials, Silicon Graphics, and many other firms from the Silicon Valley. The NASA AMES space workshops were an all-time hit; Students expressed appreciation for the exposure to science role models and to careers available to them. Students also gained new knowledge and perspectives regarding science and math as related by their teachers;

* Over 100 teachers and school administrators also participated in the workshops as students and presenter assistants at the workshops.

* Ten different school districts participated along with NASA AMES volunteers in a planning advisory board for the project;

* Twenty different schools from participating school districts conducted follow-up fieldtrips to NASA AMES.

* Thirty participants as presenters became volunteers and mentors for students (these included three from NASA AMES who volunteer as teachers and tutors at The NHU).

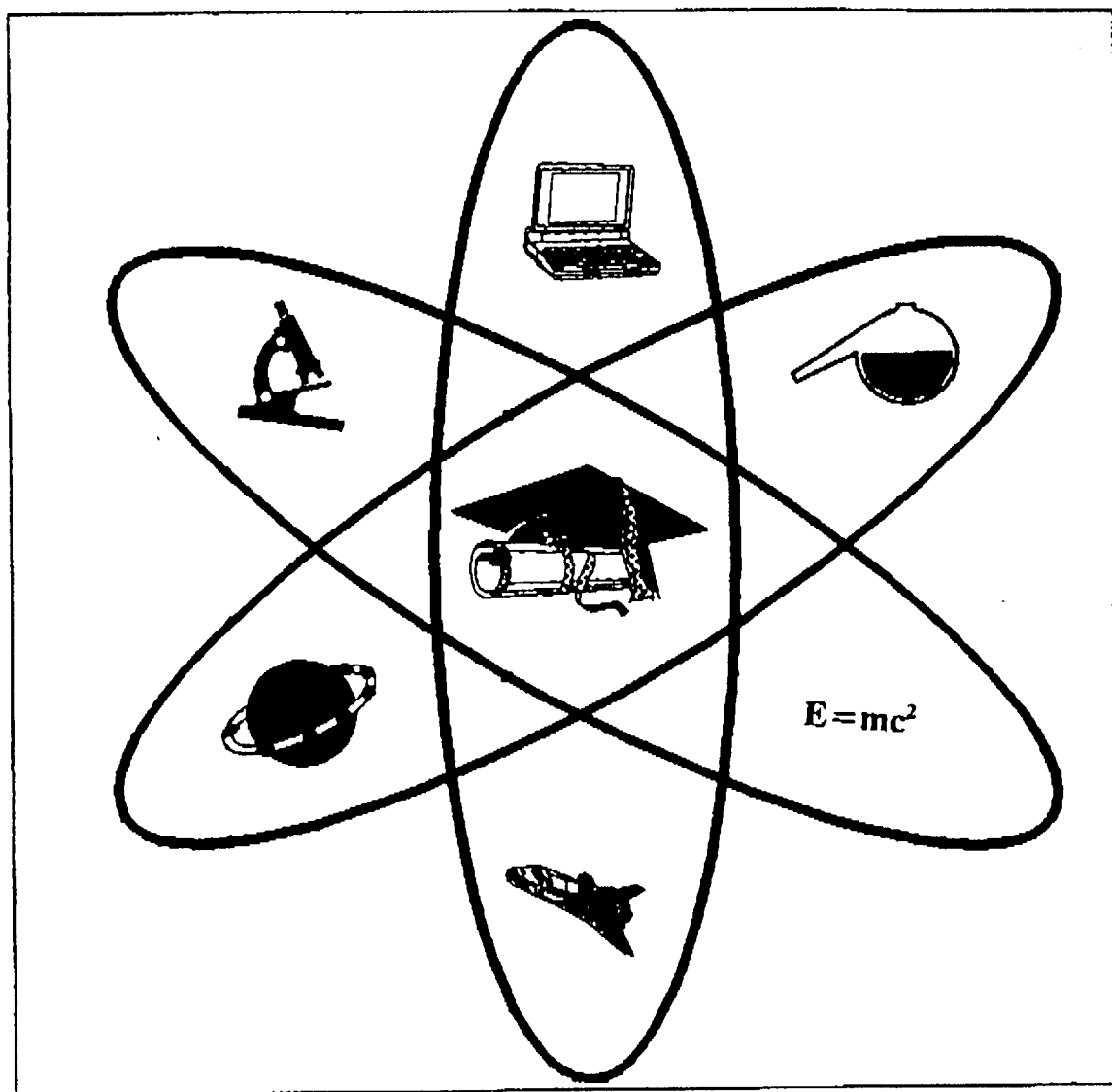
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Post Assessment and Advisory Board meetings of the Cientificos project produced the following recommendations:

- * Math/Science convocations and workshops should be followed up at participating school districts to insure that teachers follow-up with the enthusiasm displayed by students toward these careers;
- * Future Math/Science projects should focus on retraining elementary, middle and high school teachers because many teachers currently teaching minority students are scared of mathematics and science thus, they de-emphasize the importance of this subject matter;
- * NASA should send more scientists into minority dominated schools to motivate youth;
- * NASA should designate The National Hispanic University as a Science magnet school and equip it with technology and volunteers to prepare future minority scientists.

The National Hispanic University

**"Cientificos:
Preparing Scientists and Mathematicians
for the 21st Century"
Science and Math Convocation**



Le Baron Hotel
San Jose, California

8:30 - 9:00	Registration	Room
9:00 - 9:45	Opening General Session <i>Welcome</i> Vera Hanks NHU Trustee & Lockheed Missiles & Space Company <i>Preparing Scientists and Mathematicians for the 21st Century</i> Dr. B. Roberto Cruz President, The NHU <i>Overview of the day</i> Ruben Ramos, Deputy Manager Operations Group, Centrifuge Project NASA/Ames Research Center	Camino Real
9:45 - 10:00	Break/Passing Period	
10:00 - 10:50	First Workshop Period	
	<i>Wildlife Law Enforcement & Environmental Awareness</i> Gloria Lopez, Fish & Game Warden California Department of Fish & Game	La Terraza II
	<i>Computer Programming</i> Juan Pedro Garcia, Apple Computers	Golden State III
	<i>Space Exploration: Exploring Our Solar System</i> Ruben Ramos, NASA/Ames Research Center	De Anza
	<i>Tornadoes</i> Fernando Aluzzi, Graduate Student San Jose State University	Golden State I
	<i>Mechanical Engineering: A Way to Build, A Way to Learn</i> Marcos Herrera, General Electric Nuclear Division	Normandy (9th floor)
	<i>Career Exploration</i> Jorge Diaz IBM (faculty-on-loan to NHU)	NHULRC
	<i>Imageneering</i> Javier Martinez, Engineering Student San Jose State University	Burgundy (9th floor)
	<i>The Passion of Dentistry</i> Dr. Robert Dominguez Robert Dominguez, D.D.S., Inc.	Golden State II
	<i>Powers of 10: Scale and Magnitude</i> Ricardo Urbanejo, IBM	Golden State IV
	<i>Mathematics : The Man Who Discovered the World was Round</i> Robert Garcia, Lockheed Missiles & Space, retired	La Terraza I
11:00 - 11:50	Second Workshop Period	
	<i>Wildlife Law Enforcement & Environmental Awareness</i> Gloria Lopez, Fish & Game Warden California Department of Fish & Game	La Terraza II
	<i>Computer Programming</i> Juan Pedro Garcia, Apple Computers	Golden State III
	<i>Space Exploration: Exploring Our Solar System</i> Ruben Ramos, NASA/Ames Research Center	De Anza
	<i>Tornadoes</i> Fernando Aluzzi, Graduate Student San Jose State University	Golden State I

	<i>Mechanical Engineering: A Way to Build, A Way to Learn</i> Marcos Herrera, General Electric Nuclear Division	Handy 9th floor
	<i>Career Exploration</i> Jorge Diaz IBM (faculty-on-loan to NHU)	NHU LRC
	<i>Medical Technology: Be Still Heart</i> Pedro Medrano Materials Engineer, Ventritex, Inc.	Burgundy (9th floor)
	<i>The Passion of Dentistry</i> Dr. Robert Dominguez Robert Dominguez, D.D.S., Inc.	Golden State II
	<i>Powers of 10: Scale and Magnitude</i> Ricardo Urbanejo, IBM	Golden State IV
	<i>Mathematics : The Man Who Discovered the World was Round</i> Robert Garcia, Lockheed Missiles & Space, retired	La Terraza I
12:00 - 1:30	Lunch <i>Mistress of Ceremonies:</i> Celina Rodriguez, KSTS-48 <i>Keynote Speakers</i> Danny Valdez, Actor/Writer/Producer Frank Valdez, Engineer	Camino Real
1:30 - 1:45	Break/Passing Period	
1:45 - 2:50	Third Workshop Period	
	<i>Wildlife Law Enforcement & Environmental Awareness</i> Gloria Lopez, Fish & Game Warden California Department of Fish & Game	La Terraza II
	<i>Computer Programming</i> Juan Pedro Garcia, Apple Computers	Golden State III
	<i>Space Exploration: Exploring Our Solar System</i> Ruben Ramos, NASA/Ames Research Center	De Anza
	<i>Tornadoes</i> Fernando Aluzzi, Graduate Student San Jose State University	Golden State I
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	<i>Powers of 10: Scale and Magnitude</i> Ricardo Urbanejo, IBM	Golden State IV
	<i>Mathematics : The Man Who Discovered the World was Round</i> Robert Garcia, Lockheed Missiles & Space, retired	La Terraza I
	<i>Kandid Shots</i> Tino Gonzalez, Phase Two Industries	Golden State II
2:50 - 3:00	Break/Passing Period	
3:00 - 3:45	Closing General Session <i>The Sky Is the Limit</i> Superintendent Joe Coto East Side Union High School District	Camino Real
4:00 p.m.	Adjournment	

Planning Committee

(by alphabetical order)

Edith Barr
Science Faculty
The National Hispanic University

Mireya Casarez
James Logan High School
New Haven Unified School District

Maurice Hernandez
Lawrence Livermore National Laboratory

Gus Lerma
Lockheed Missiles & Space Company

Dr. Tae-Soon Park
Chair, Mathematics Program
The National Hispanic University

Dr. Riley Parker
Chair, Science Program
The National Hispanic University

Superintendent Aurora Quevedo
Salinas Unified School District

Ruben Ramos
Integration, Test, and Operation,
Spacestation Centrifuge Project
NASA/Ames Research Center

Vic Ramos
Bilingual Science Program
The National Hispanic University

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Co-op Ed./University Relations
The National Hispanic University

Maria Elena Riddle
Educational Talent Search
The National Hispanic University

Jesse Rizzo
San Jose Unified School District

Denise Robinson
Lawrence Livermore National Laboratory

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Program

The National Hispanic University
Mathematics Program

The National Hispanic University Co-op
Education